

FIG. 2

401	402	403	404	405	406	407
FIELD	IMPROVED PARAMETER	DETERIO- RATED PARAMETER	SOLUTION RULE NO.	PROBLEM NAME	SOLUTION	ATTENDANT INFORMATION CONCERNED WITH SOLUTION

FIG. 3

140 } 130 }

IMPROVED PARAMETER	DETERIORATED PARAMETER	1 WEIGHT OF MOVING OBJECT	2 WEIGHT OF STILL OBJECT	3 LENGTH OF MOVING OBJECT	4 LENGTH OF STILL OBJECT	5 AREA OF MOVING OBJECT	6 AREA OF STILL OBJECT	7 VOLUME OF MOVING OBJECT	8 VOLUME OF STILL OBJECT	9 VELOC
1 WEIGHT OF MOVING OBJECT			-	15,08,29,34	-	29,17,38,34	-	29,02,40,28	-	02,08,15
2 WEIGHT OF STILL OBJECT		-		-	10,01,29,35	-	35,30,13,02	-	05,35,14,02	-
3 LENGTH OF MOVING OBJECT	15,08,29,34		-		-	15,17,04	-	07,17,04,35	-	13,04
4 LENGTH OF STILL OBJECT	-		38,28,40,29	-		-	17,07,10,40	-	35,08,02,14	-
5 AREA OF MOVING OBJECT	02,17,29,04		-	14,15,18,04	-		-	07,14,17,04	-	29,30,
6 AREA OF STILL OBJECT	-		30,02,14,18	-	26,07,09,39	-		-	-	-
7 VOLUME OF MOVING OBJECT	02,25,29,40		-	01,07,35,04	-	10,07,04,17	-		-	26,04,3
8 VOLUME OF STILL OBJECT	-		35,10,19,14	19,14	35,08,02,14	-	-	-		-
9 VELOCITY	02,28,13,38		-	13,14,08	-	29,30,34	-	07,29,34	-	
10 FORCE	08,01,37,18		18,13,01,28	17,19,09,36	28,01	19,10,15	01,18,36,37	15,09,12,37	02,36,18,37	13,28,15
11 STRESS PRESSURE	10,36,37,40		13,29,10,18	35,10,36	35,01,14,16	10,15,36,28	10,15,36,37	06,35,10	35,34	06,35,34
12 SHAPE	08,10,29,04		15,10,26,03	29,34,05,04	13,14,10,07	06,34,04,10	-	14,04,15,22	07,02,35	35,15,34
13 STABILITY OF STRUCTURE OF SUBSTANCE OBJECT	21,35,02,39		26,39,01,40	13,15,01,28	37	02,11,13	39	28,10,19,39	34,28,35,40	33,15,28
14 STRENGTH	01,08,40,15		40,26,27,01	-	15,14,28,26	03,34,40,29	09,40,28	10,15,14,07	09,14,17,15	08,13,26
15 DURATION OF ACTION OF MOVING OBJECT	18,05,34,31		-	02,19,09	-	03,17,19	-	10,02,19,30	-	03,35,
16 DURATION OF ACTION OF STILL OBJECT	-		06,27,19,16	-	01,40,35	-	-	35,34,38	-	-
17 TEMPERATURE	36,22,06,38		22,35,32		15,19,09	03,35,39,18	35,38	34,39,40,18	35,06,04	02,28,
18 LUMINANCE BRIGHTNESS							-	02,13,10		10,1

FIG. 4

NO.	TYPES OF RULES	NO.	TYPES OF RULES
1	RULE OF DIVISION	21	RULE OF SUPER FAST EXECUTION
2	RULE OF REMOVAL / EXTRACTION	22	RULE OF GOOD COMING OUT OF EVIL
3	RULE OF LOCAL QUALITY	23	RULE OF FEEDBACK
4	RULE OF ASYMMETRY	24	RULE OF INTERMEDIACY
5	RULE OF JOINING	25	RULE OF SELF SERVICE
6	RULE OF VERSATILITY	26	RULE OF COPY
7	RULE OF NESTING	27	RULE OF MERIT OF USING INEXPENSIVE SHORT LIFE RATHER THAN EXPENSIVE LONG LIFE
8	RULE OF BALANCE	28	RULE OF REPLACEMENT OF MECHANICAL SYSTEM
9	RULE OF PREOCCUPATION COUNTERACTANT	29	RULE OF AIR PRESSURE AND LIQUID PRESSURE
10	RULE OF PREOCCUPATION ACTION	30	RULE OF USING THIN FILM
11	RULE OF PROTECTION IN ADVANCE	31	RULE OF USING POROUS MATERIAL
12	RULE OF EQUIPOTENTIAL	32	RULE OF USING DISCOLORATION
13	RULE OF REVERSE ASSOCIATION	33	RULE OF HOMOGENEITY
14	RULE OF CURVED LINE / CURVED SURFACE	34	RULE OF REJECTION / REPRODUCTION OF COMPONENT
15	RULE OF DYNAMIC PROPERTY	35	RULE OF CHANGING CONDENSED CONDITION
16	RULE OF ABOUT	36	RULE OF PHASE CHANGE
17	RULE OF TRANSITION TO OTHER DIMENSION	37	RULE OF THERMAL EXPANSION
18	RULE OF USE OF MECHANICAL VIBRATION	38	RULE OF USING HIGHLY CONCENTRATED OXYGEN
19	RULE OF PERIODIC ACTION	39	RULE OF USE OF INACTIVE ATMOSPHERE
20	RULE OF CONTINUING USEFUL EFFECT	40	RULE OF USING COMPOSITE MATERIAL

FIG. 5

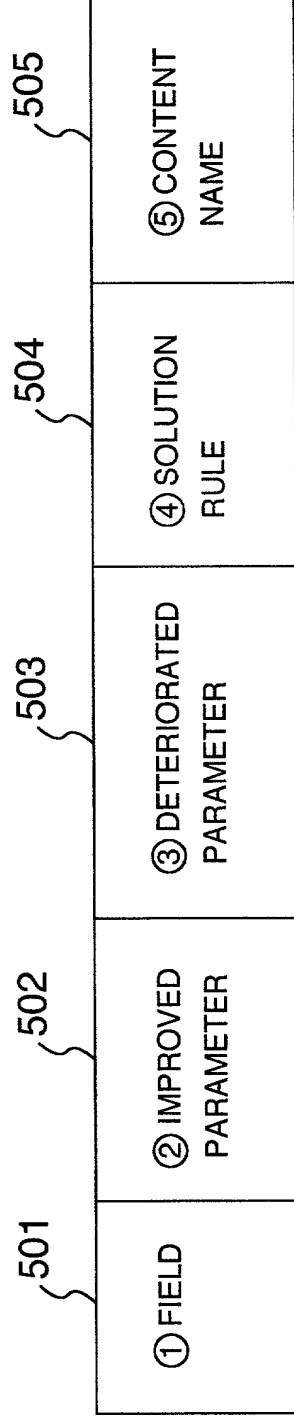


FIG. 6

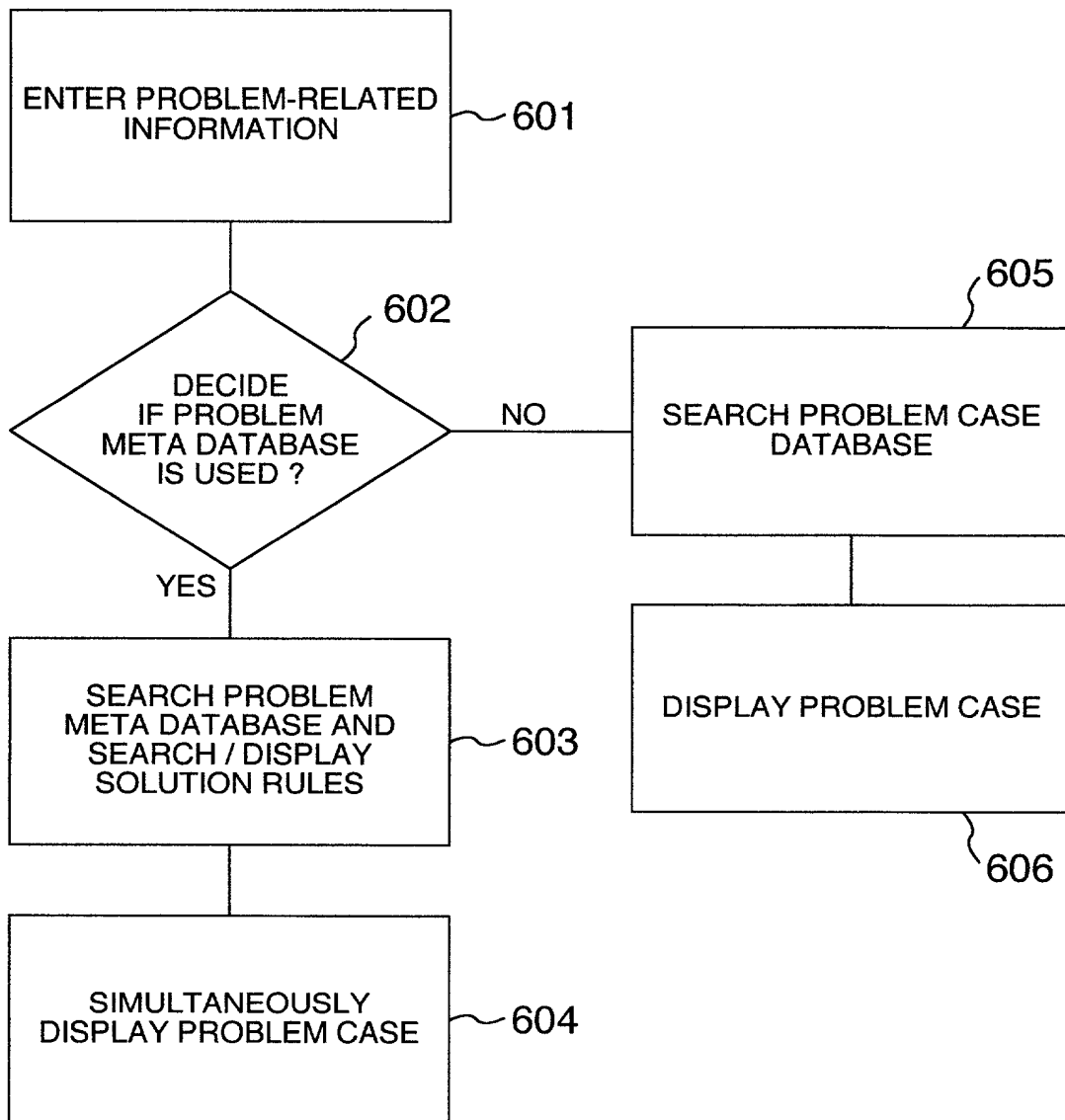


FIG. 7

IMPROVED PARAMETER:
LENGTH OF MOVING OBJECT
DETERIORATED PARAMETER:
VOLUME OF MOVING OBJECT

RULE:
NO.7 RULE OF NESTING
NO. 17 RULE OF TRANSITION TO OTHER DIMENSION
NO.4 RULE OF ASYMMETRY
NO.35 RULE OF PARAMETER CHANGE

NO.	EXAMPLES OF SOLUTION	RULE NO.
1	MAKE FESCUE NESTED	7
2	MAKE FESCUE OPTICAL POINTER	17
3	.	.
4	.	.
5	.	.
6	.	.
7	.	.
8	.	.
9	.	.

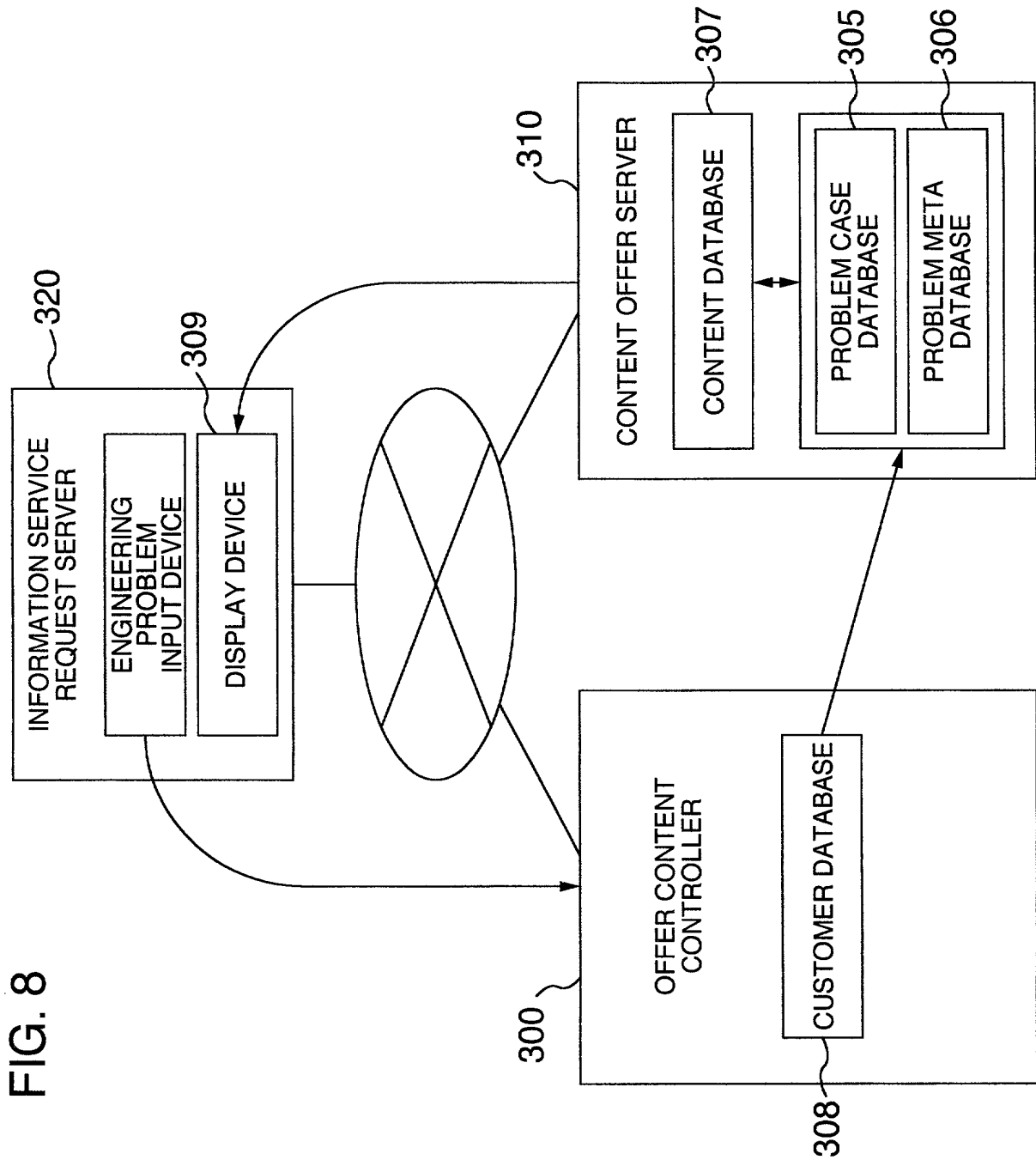


FIG. 9

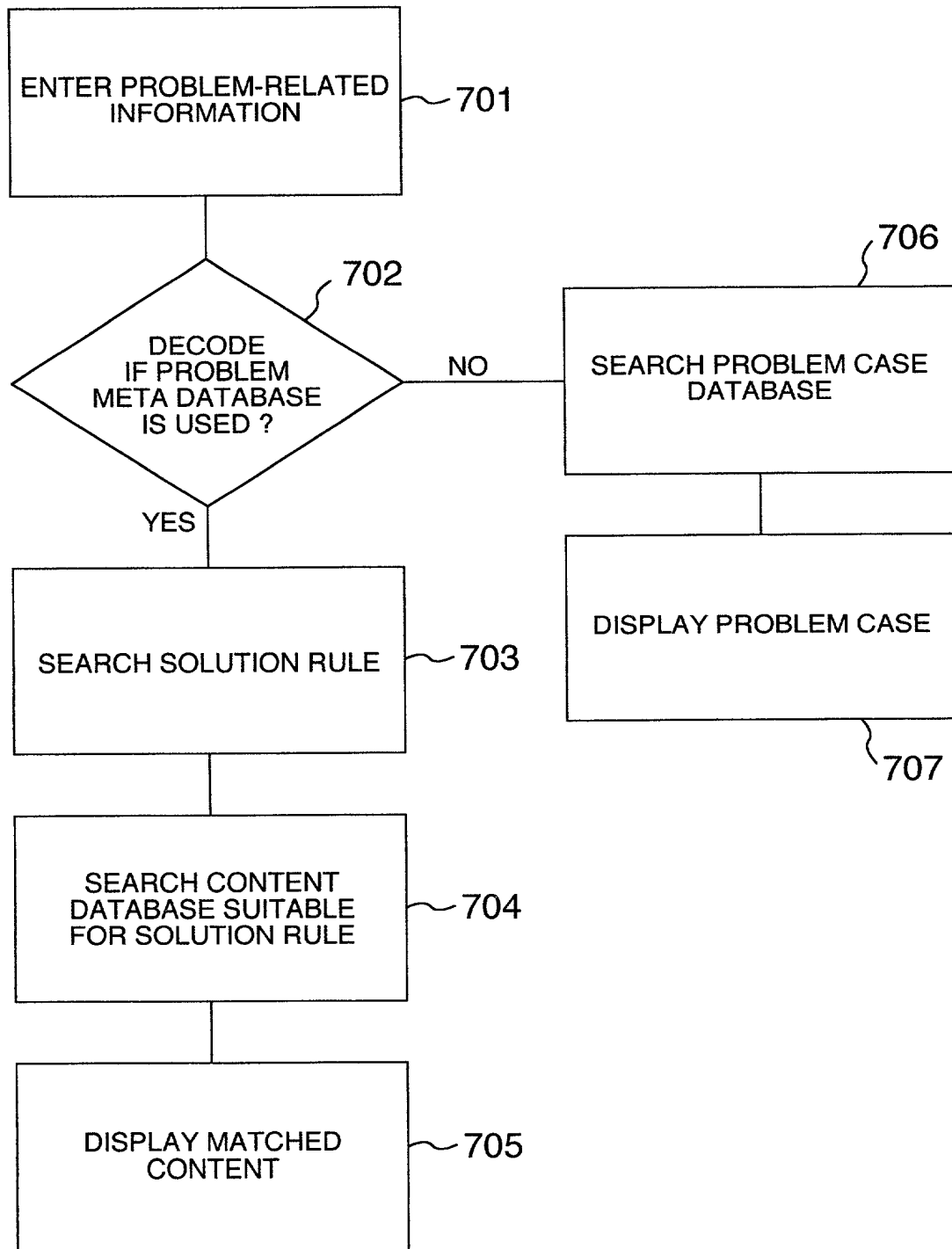


FIG. 10

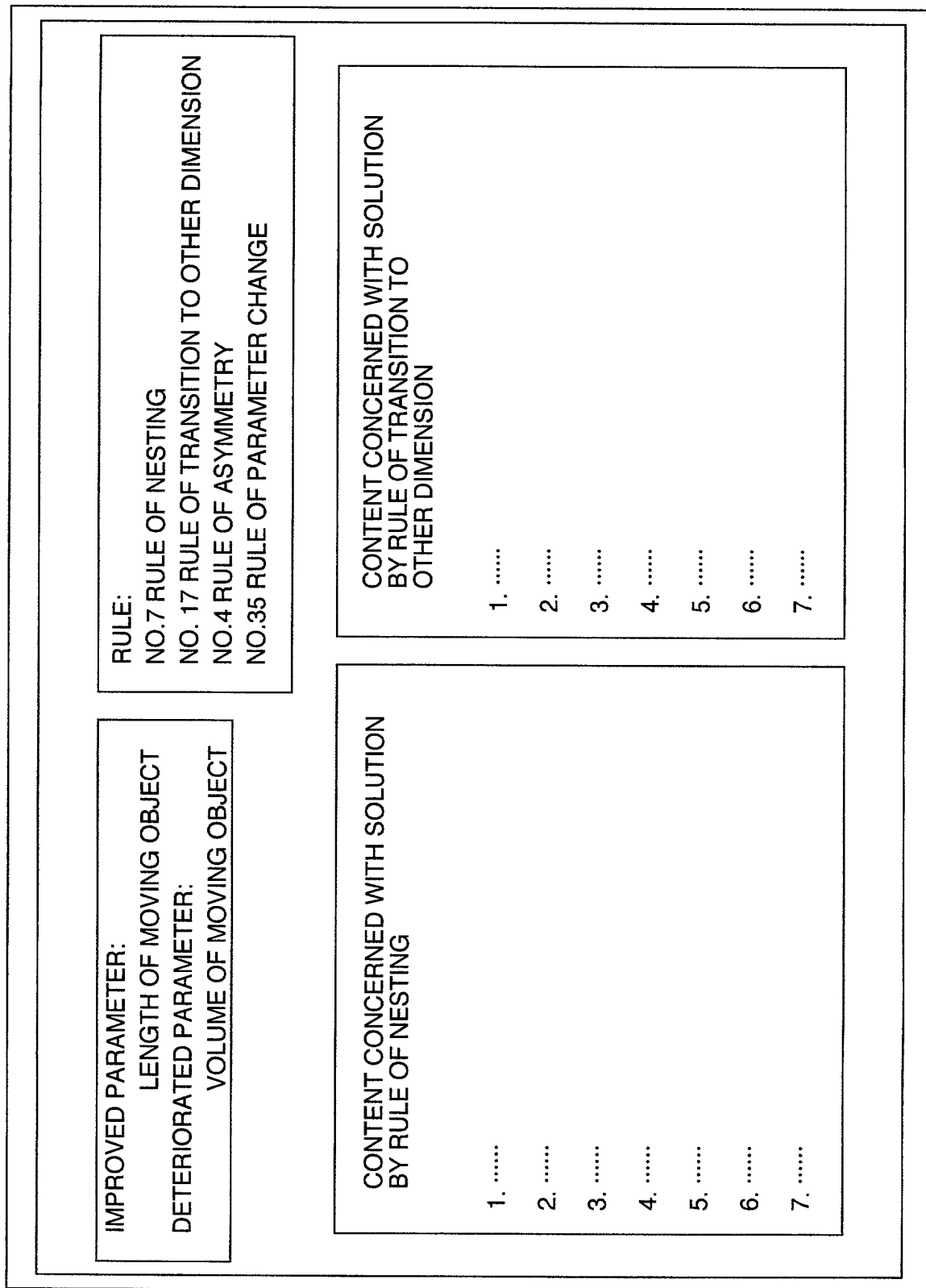
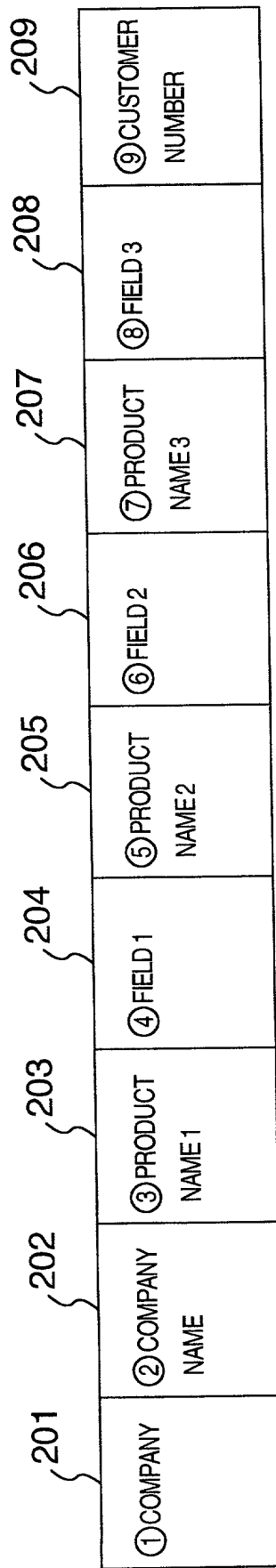


FIG. 11



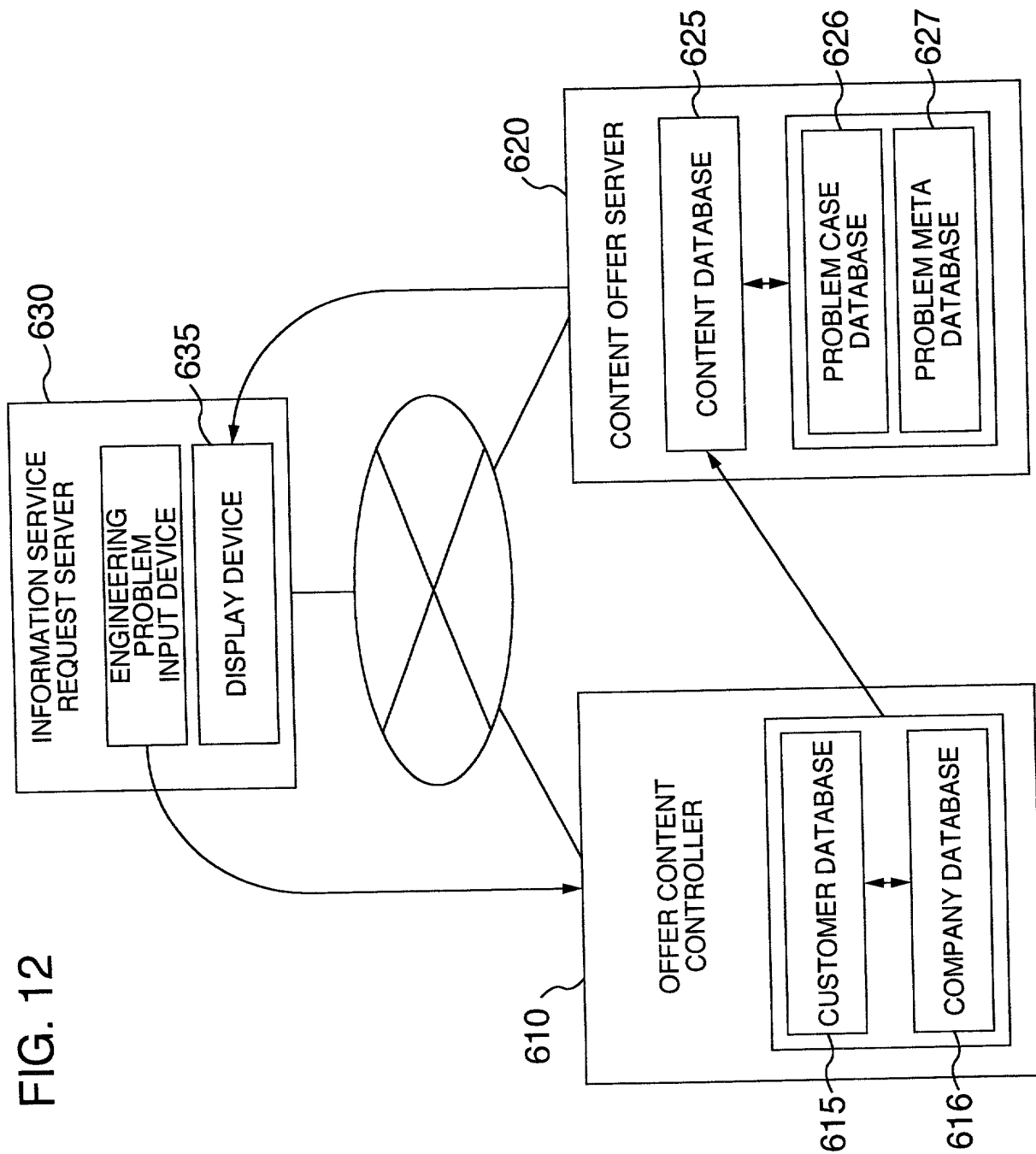


FIG. 13

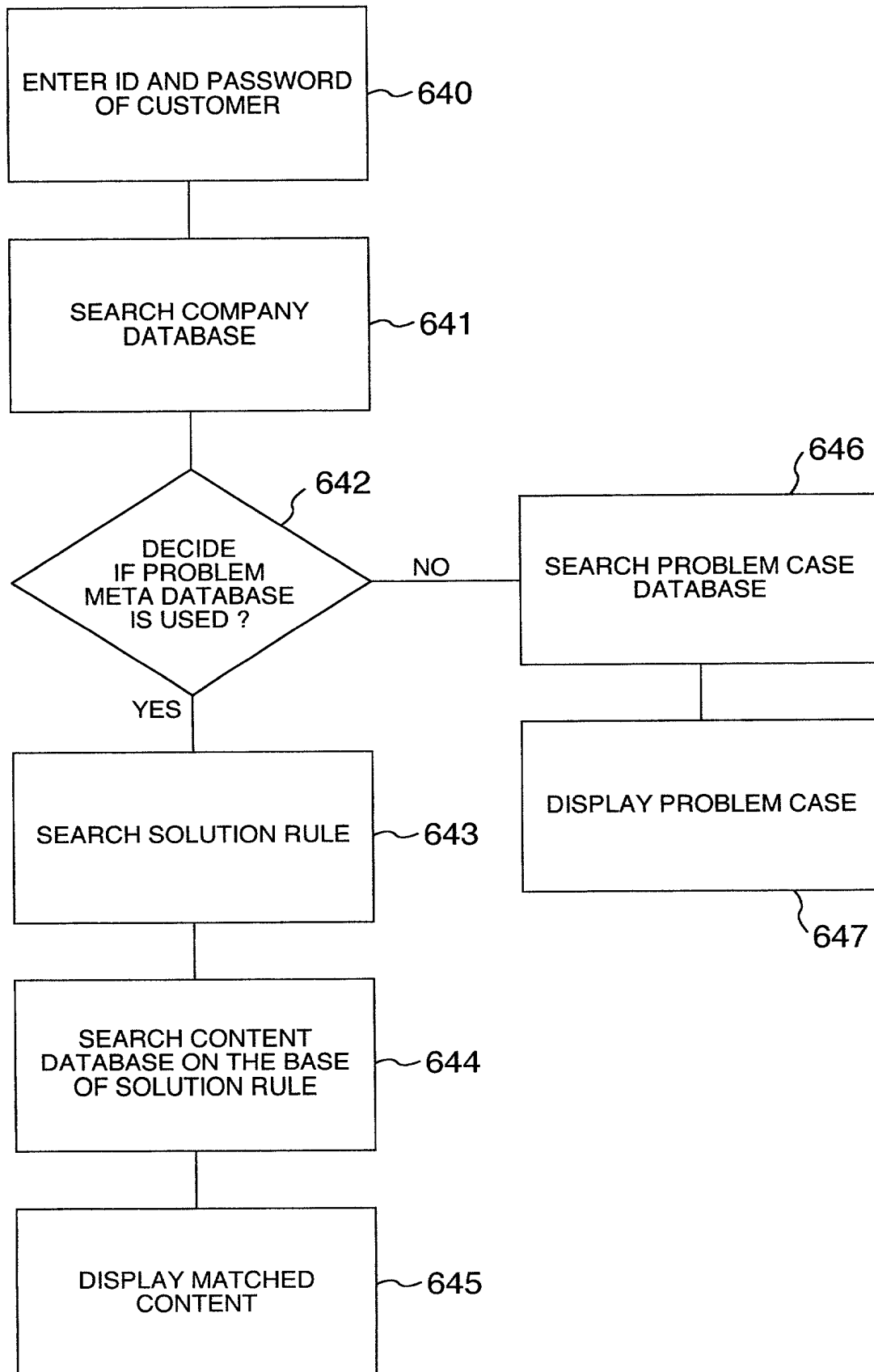


FIG. 14

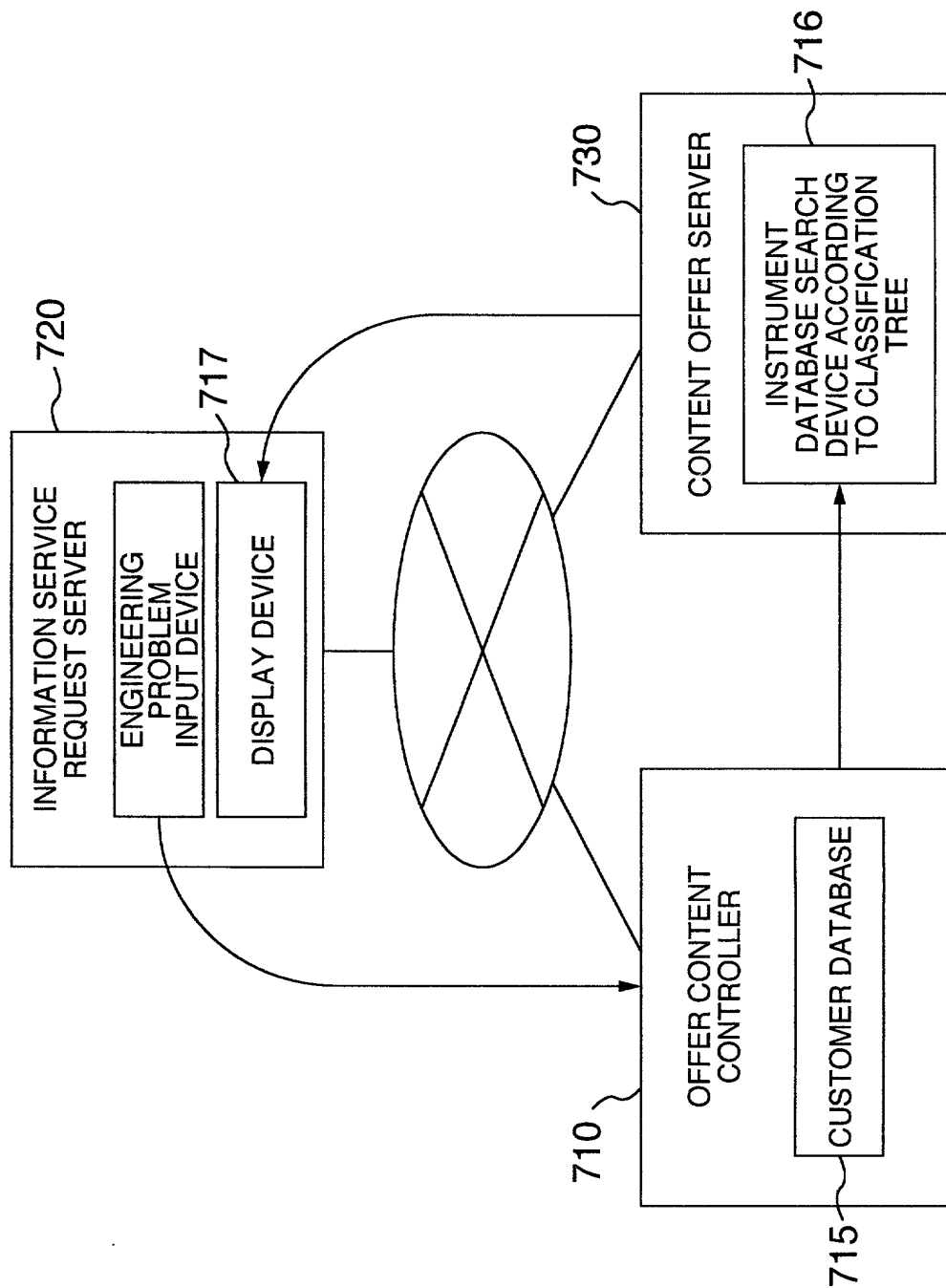


FIG. 15

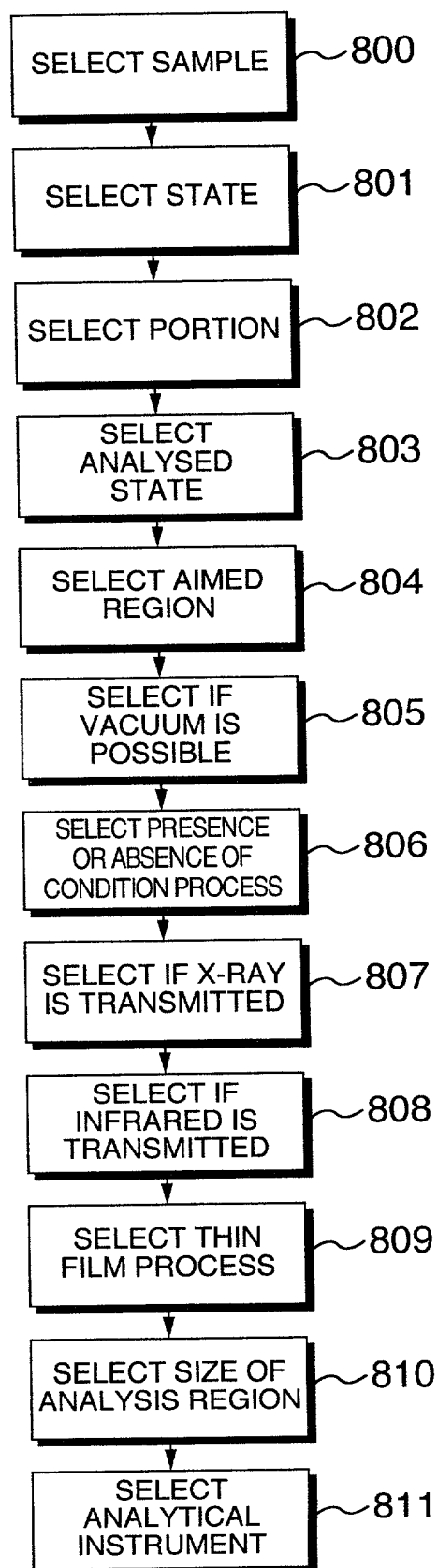


FIG. 16

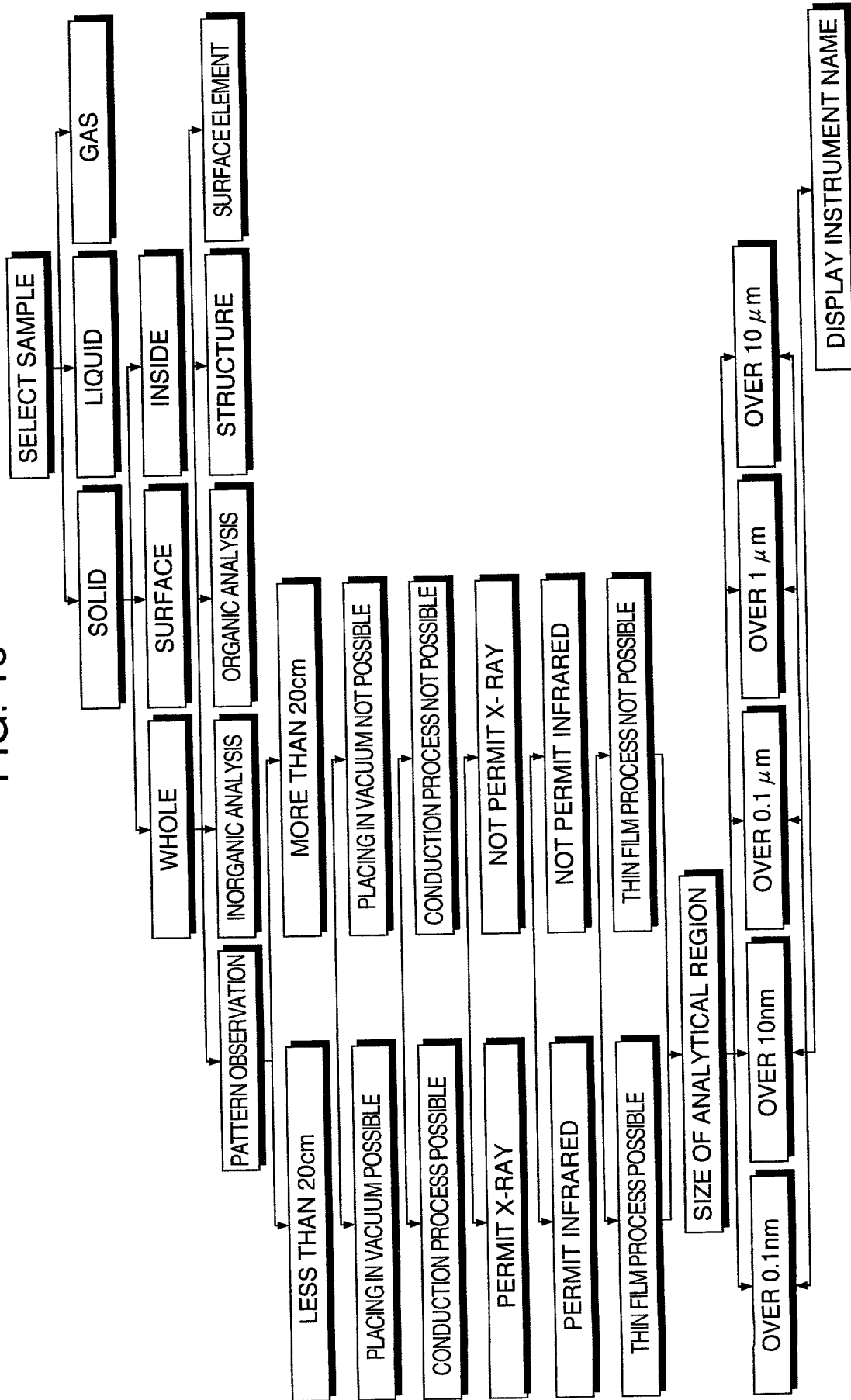


FIG. 17

901

HISTORY

QUESTION SELECTION

SAMPLE SELECTION	SOLID SURFACE
ANALYSIS INFORMATION	

ANALYTICAL INFORMATION TO BE ACQUIRED

PATTERN OBSERVATION

PATTERN OBSERVATION

SURFACE ELEMENT

SURFACE ELEMENT

INORGANIC ANALYSIS (ELEMENT)

QUALITATIVE

QUANTITATIVE

DEFECTIVE REGION OF SAMPLE

SURFACE ELEMENT

ORGANIC ANALYSIS

QUALITATIVE

QUANTITATIVE

STRUCTURE (CRYSTAL, NONCRYSTAL, STATE)

STRUCTURE

902

GO BACK

GO ON

903

905

ANALYZER

OPTICAL MICROSCOPE

LASER MICROSCOPE

SEM

FT-IR (INFRARED SPECTROSCOPY)

MICROSCOPE FT-IR

NMR

GAS CHRO.

STATIC SIMS

ATOMIC ABSORPTION

ION CHRP MATO.

RAMAN

X-RAY FLUORESCENCE

ICP-AES

SEM-EDX

PHOTOELECTRON SPECTROSCOPY

TEM-EDX

ESCA

SIMS

XRD

TEM

HEED

FIG. 19

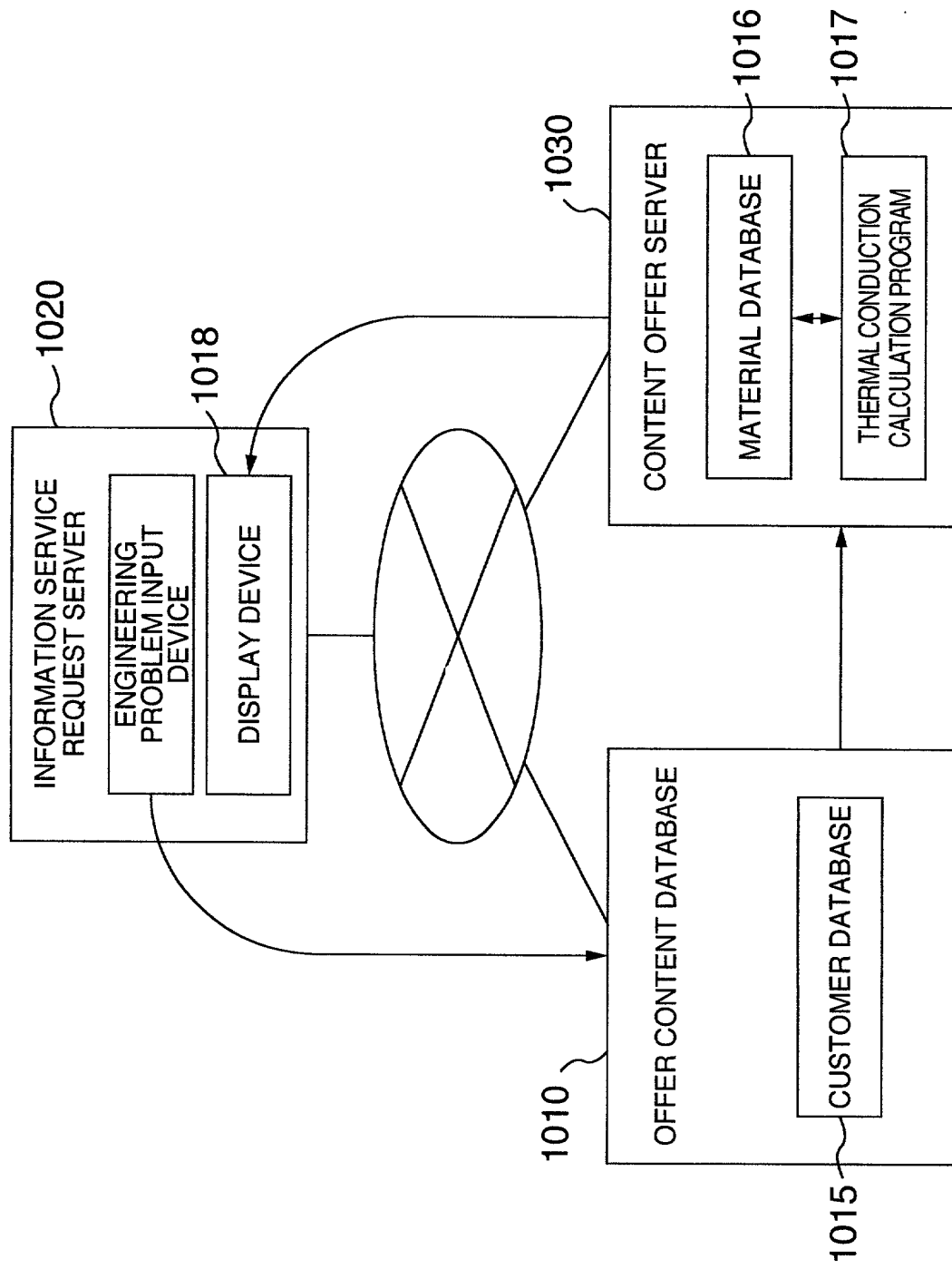
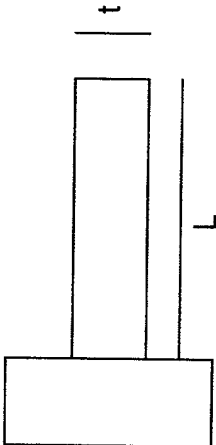


FIG. 20

THERMAL CONDUCTION ENGINEERING

ONE-DIMENSIONAL FIN CALCULATION

INPUT OF CALCULATION
CONDITION



INPUT DATA	L[mm]:FIN LENGTH	300
	t[mm]:THICKNESS	2.0
	B[mm]:THICKNESS	1000.0
	Tb[°C]:FIN ROOT TEMP.	50.0
	Ts[°C]:AMBIENT TEMP.	20.0
	k[W/mk]:THERMAL CONDUCTIVITY	237.0
	k[W/m ² k]:THERMAL CONDUCTIVITY	100.0
	MATERIAL NAME	SS41

908

EXECUTE

RESET

FIG. 21

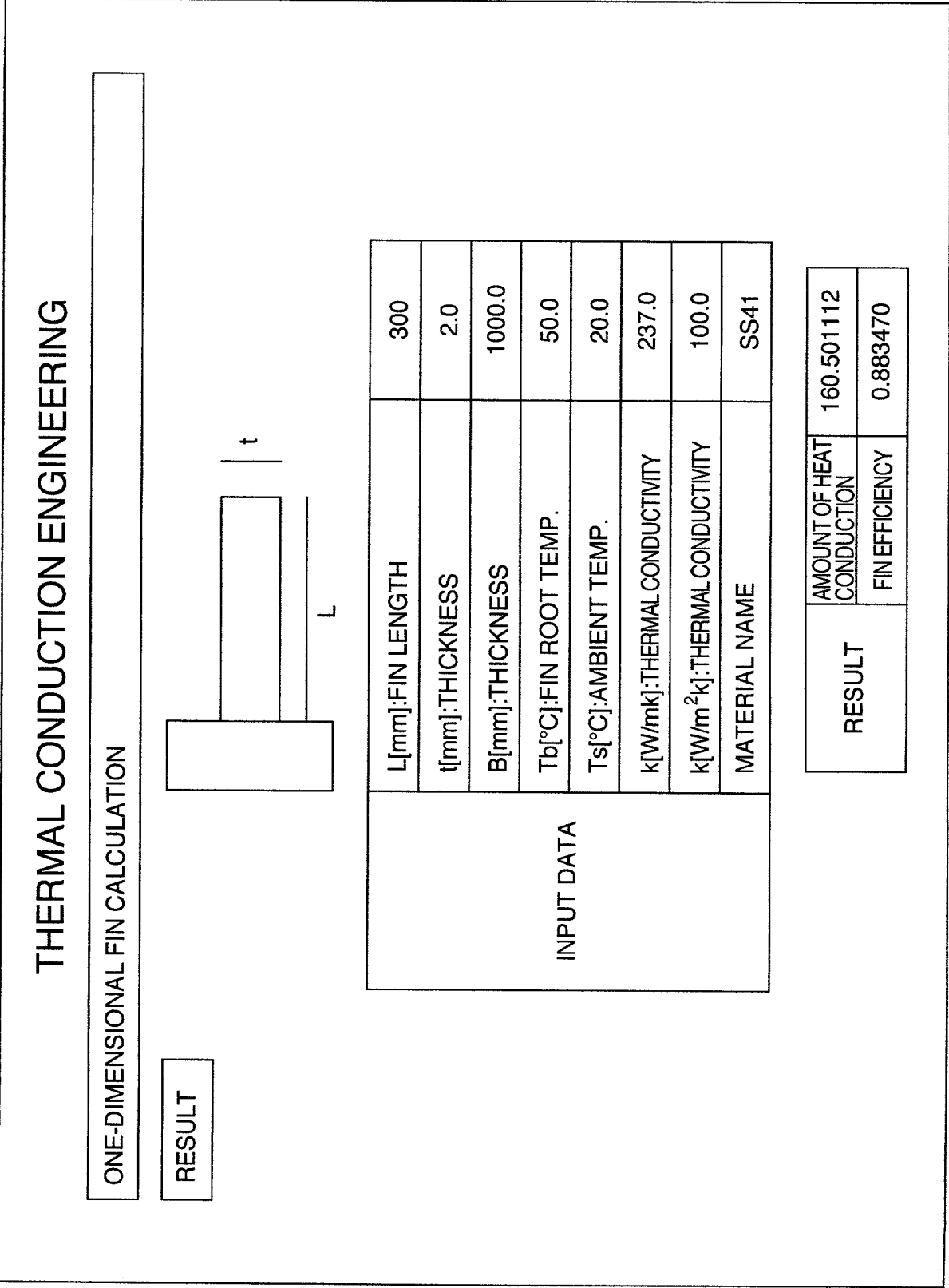


FIG. 22

CALCULATION OF FLEXURE, SHEARING STRESS,
BENDING MOMENT OF SIMPLE BEAM

